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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,288	07/15/2005	Kazumi Shiikuma	Q88876	7276

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EXAMINER
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NGUYEN, KHANH V

ART UNIT	PAPER NUMBER
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2817

MAIL DATE	DELIVERY MODE
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05/03/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/542,288

Applicant(s)

SHIIKUMA, KAZUMI

Examiner

Khanh V. Nguyen

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,4,6 and 8 is/are allowed.
- 6) ☒ Claim(s) 2,3,5,7 and 9-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 7/05,10/05,2/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 3, 5, 8, 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Hellberg (6,639,464).

Regarding claims 3, 8, Hellberg (Fig. 5) discloses a composite amplifier which can be read as a Doherty amplifier comprising: a main amplifier (10) can be read as a carrier amplifier; an auxiliary amplifier (12) can be read as a peak amplifier; an output combiner for combining the outputs of main amplifier (10) and auxiliary amplifier (12); an input branching unit coupled to the inputs of the main amplifier and auxiliary amplifier; and an attenuation unit (34) disposed prior to the auxiliary amplifier (12) comprises a pre-distortion having the function as claimed, see claim 8.

Regarding claims 5, 11, wherein the pre-distortion comprises amplitude-phase distortion.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 7, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (2004/0113698) in view of Hellberg (6,639,464).

Regarding claims 2, 7, Kim et al. disclose the claimed invention except a pre-distortion circuit coupled prior to the carrier amplifier. Kim et al. (Fig. 2) disclose a Doherty amplifier comprising: a carrier amplifier (210); a peak amplifier (220); an output combiner (400) for combining the outputs of carrier amplifier (210) and auxiliary amplifier (220), a splitter (100) can be read as a branching circuit; and an attenuator (110) disposed prior to the carrier amplifier (210).

Hellberg (Fig. 5) discloses attenuator (34) comprises a pre-distortion unit, see claim 8.

Accordingly, it would have been obvious in view of the reference, taken as a whole, to have replaced attenuator of Kim et al. with an attenuator having pre-distortion unit, as taught by Hellberg. Such a modification would have imparted the advantageous benefit of compensating any distortion in the circuit, thereby suggesting the obviousness of such a modification.

Regarding claim 10, wherein Hellberg discloses amplitude-phase distortion.

***Allowable Subject Matter***

Claims 1, 4, 6, 8 are allowed.


Claims 1, 4, 6, 8 call for, among others, first and second pre-distortions disposed prior to the carrier and peak amplifiers, respectively.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh V. Nguyen whose telephone number is (571) 272-1767. The examiner can normally be reached Monday to Friday from 8:00 AM – 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
KHANH V. NGUYEN  
PRIMARY EXAMINER